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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/987,680 | 11/15/2001 | Hideo Hoshuyama | 111118 | 7530 |
| 25944 | 7590 | 01/30/2006 | EXAMINER | |
| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | LAROSE, COLIN M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2627 | |

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 09/987,680 | Applicant(s) HOSHUYAMA, HIDEO | |
| | Examiner Colin M. LaRose | Art Unit 2627 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Arguments and Amendments

1. Applicant's amendments and arguments filed 18 October 2004, have been entered and made of record.

Response to Amendments and Arguments

2. By way of amendment, Applicant has cancelled all previously-pending claims (1-14) and has introduced all new claims (15-19) directed to substantially the same invention. A treatment of these new claims is found below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,504,551 by Takashima et al. ("Takashima").

Regarding claims 15, 18, and 19, Takashima discloses an image processing device/method/computer program (figure 2), comprising:

a color coordinate conversion device (second matrix circuit 44) which converts first color coordinates of a color signal into signals under second color coordinates comprising a luminance component and color difference components; and

a color difference signal correction unit (secondary processor 38, shown in more details in figure 12) that receives signals corresponding to the color difference components (i.e. it receives the U and V color components), and outputs corrected signals corresponding to the color difference components and a correction amount for a signal corresponding to the luminance component by using a look-up table based upon the received signals corresponding to the color difference signals (i.e. the secondary processor 38 uses the look-up table 52 to output corrected color difference components (U_d and V_d) and a correction amount for the luminance component ($\Sigma\Delta Y$)).

Takashima discloses that an image with signals under first coordinates is obtained from a "source" (see figure 1), however, Takashima does not disclose that the image is captured from an image-capturing device that outputs image signals, as claimed.

Girod discloses a color image correction system that is very similar to that of Takashima in that look-up table(s) are employed to correct color difference signals (see e.g. figure 4). Girod discloses an image being captured by a camera (22) and then converted into a luminance-chrominance format via a matrix conversion (66).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Takashima by Girod to capture the image with an image-capturing device (i.e. a camera), as claimed, since Takashima discloses obtaining the color image from an image source, and Girod shows that a camera is a conventional source of color images.

In addition, Takashima does not expressly disclose that the look-up table 52 in figure 12 is a "two dimensional" look-up table. Takashima's table 52 receives a value θ_s , which corresponds to an angle, and derives a set of outputs based on θ_s and entries in the look-up table.

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Although not expressly stated by Takashima, LUT 52 can reasonably be considered a 2-D look-up table. Since the table outputs three values, it must have three entries for every possible input value θ_s . Therefore, the size of the LUT is $3 \times N$, where N is the number of possible input values.

Alternatively, the LUT can be considered 2-D, or at least functionally equivalent to a 2-D look-up table, since its input value θ_s is directly derived from the two color components U_s and V_s . That is, the coordinate transform circuit 51 receives color values U_s and V_s and transforms them into θ_s prior to being input into the LUT. As such, the input to the LUT is essentially “two-dimensional” data directly pertaining to the color components U_s and V_s , and in view of this fact, those skilled in the art would have recognized that the LUT 52 is at least functionally equivalent to a “two dimensional” look-up table.

Regarding claim 16, Takashima discloses the color coordinate conversion device converts color coordinates of a color signal by matrix calculation (i.e. second matrix circuit 44 performs a matrix calculation)

Regarding claim 17, Takashima discloses a luminance signal correction unit (54Y, figure 12) that corrects the signal corresponding to the luminance component with the correction amount and outputs a corrected signal corresponding to the luminance component.

Takashima does not expressly disclose a compression unit to compress the corrected signal or a recording unit to record a compressed signal. However, at the time the invention was made, it was extremely conventional in the art of image processing to, after correcting an

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image, to compress it for storage. Such limitations would have been readily obvious to those skilled in the art. Official notice taken.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,816,610 by Beckwith.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

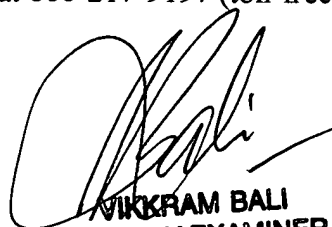
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor,

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Bhavesh Mehta, can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CML
Group Art Unit 2627
9 January 2006



VIKKRAM BALI
PRIMARY EXAMINER